



1

SEQUENCE LISTING

<110> Naparstek, Yaakov
Ulman sky, Rina
Kashi, Yechezkel

<120> NOVEL AMINO ACID SEQUENCES, DNA ENCODING
THE AMINO ACID SEQUENCES, ANTIBODIES DIRECTED AGAINST SUCH
SEQUENCES AND THE DIFFERENT USES THEREOF

<130> 13125-002001

<140> 09/847,637

<141> 2001-05-02

<150> PCT/IL99/00595

<151> 1999-11-04

<150> 60/107,213

<151> 1998-11-05

<160> 9

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 22

<212> PRT

<213> Mycobacterium tuberculosis

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Thr Ile Thr Asn Asp Gly
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<211> 16

<212> PRT

<213> Mycobacterium tuberculosis

<400> 2

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<210> 3

<211> 16

<212> PRT

<213> Mycobacterium tuberculosis

<400> 3

Val Val Leu Glu Lys Lys Trp Gly Ala Pro Thr Ile Thr Asn Asp Gly
1 5 10 15

<210> 4

COPY OF PAPERS
ORIGINALLY FILED

<211> 20
 <212> PRT
 <213> Homo sapiens

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 Gly Val Thr Val
 20

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 <212> DNA
 <213> Homo sapiens

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 ctcgaga

60
 67

<210> 6
 <211> 540
 <212> PRT
 <213> Mycobacterium tuberculosis

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 Lys Gly Arg Asn Val Val Leu Glu Lys Lys Trp Gly Ala Pro Thr Ile
 35 40 45
 Thr Asn Asp Gly Val Ser Ile Ala Lys Glu Ile Glu Leu Glu Asp Pro
 50 55 60
 Tyr Glu Lys Ile Gly Ala Glu Leu Val Lys Glu Val Ala Lys Lys Thr
 65 70 75 80
 Asp Asp Val Ala Gly Asp Gly Thr Thr Thr Ala Thr Val Leu Ala Gln
 85 90 95
 Ala Leu Val Arg Glu Gly Leu Arg Asn Val Ala Ala Gly Ala Asn Pro
 100 105 110
 Leu Gly Leu Lys Arg Gly Ile Glu Lys Ala Val Glu Lys Val Thr Glu
 115 120 125
 Thr Leu Leu Lys Gly Ala Lys Glu Val Glu Thr Lys Glu Gln Ile Ala
 130 135 140
 Ala Thr Ala Ala Ile Ser Ala Gly Asp Gln Ser Ile Gly Asp Leu Ile
 145 150 155 160
 Ala Glu Ala Met Asp Lys Val Gly Asn Glu Gly Val Ile Thr Val Glu
 165 170 175
 Glu Ser Asn Thr Phe Gly Leu Gln Leu Glu Leu Thr Glu Gly Met Arg
 180 185 190
 Phe Asp Lys Gly Tyr Ile Ser Gly Tyr Phe Val Thr Asp Pro Glu Arg
 195 200 205
 Gln Glu Ala Val Leu Glu Asp Pro Tyr Ile Leu Leu Val Ser Ser Lys
 210 215 220
 Val Ser Thr Val Lys Asp Leu Leu Pro Leu Leu Glu Lys Val Ile Gly
 225 230 235 240
 Ala Gly Lys Pro Leu Leu Ile Ile Ala Glu Asp Val Glu Gly Glu Ala
 245 250 255

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Leu Ser Thr Leu Val Val Asn Lys Ile Arg Gly Thr Phe Lys Ser Val
 260 265 270
 Ala Val Lys Ala Pro Gly Phe Gly Asp Arg Arg Lys Ala Met Leu Gln
 275 280 285
 Asp Met Ala Ile Leu Thr Gly Gly Gln Val Ile Ser Glu Glu Val Gly
 290 295 300
 Leu Thr Leu Glu Asn Ala Asp Leu Ser Leu Leu Gly Lys Ala Arg Lys
 305 310 315 320
 Val Val Val Thr Lys Asp Glu Thr Thr Ile Val Glu Gly Ala Gly Asp
 325 330 335
 Thr Asp Ala Ile Ala Gly Arg Val Ala Gln Ile Arg Gln Glu Ile Glu
 340 345 350
 Asn Ser Asp Ser Asp Tyr Asp Arg Glu Lys Leu Gln Glu Arg Leu Ala
 355 360 365
 Lys Leu Ala Gly Gly Val Ala Val Ile Lys Ala Gly Ala Ala Thr Glu
 370 375 380
 Val Glu Leu Lys Glu Arg Lys His Arg Ile Glu Asp Ala Val Arg Asn
 385 390 395 400
 Ala Lys Ala Ala Val Glu Glu Gly Ile Val Ala Gly Gly Gly Val Thr
 405 410 415
 Leu Leu Gln Ala Ala Pro Thr Leu Asp Glu Leu Lys Leu Glu Gly Asp
 420 425 430
 Glu Ala Thr Gly Ala Asn Ile Val Lys Val Ala Leu Glu Ala Pro Leu
 435 440 445
 Lys Gln Ile Ala Phe Asn Ser Gly Leu Glu Pro Gly Val Val Ala Glu
 450 455 460
 Lys Val Arg Asn Leu Pro Ala Gly His Gly Leu Asn Ala Gln Thr Gly
 465 470 475 480
 Val Tyr Glu Asp Leu Leu Ala Ala Gly Val Ala Asp Pro Val Lys Val
 485 490 495
 Thr Arg Ser Ala Leu Gln Asn Ala Ala Ser Ile Ala Gly Leu Phe Leu
 500 505 510
 Thr Thr Glu Ala Val Val Ala Asp Lys Pro Glu Lys Glu Lys Ala Ser
 515 520 525
 Val Pro Gly Gly Gly Asp Met Gly Gly Met Asp Phe
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<210> 7

<211> 573

<212> PRT

<213> Rattus norvegicus

<400> 7

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 20 25 30
 Gly Ala Asp Ala Arg Ala Leu Met Leu Gln Gly Val Asp Leu Leu Ala
 35 40 45
 Asp Ala Val Ala Val Thr Met Gly Pro Lys Gly Arg Thr Val Ile Ile
 50 55 60
 Glu Gln Ser Trp Gly Ser Pro Lys Val Thr Lys Asp Gly Val Thr Val
 65 70 75 80
 Ala Lys Ser Ile Asp Leu Lys Asp Lys Tyr Lys Asn Ile Gly Ala Lys
 85 90 95
 Leu Val Gln Asp Val Ala Asn Asn Thr Asn Glu Glu Ala Gly Asp Gly
 100 105 110

Thr Thr Thr Ala Thr Val Leu Ala Arg Ser Ile Ala Lys Glu Gly Phe
 115 120 125
 Glu Lys Ile Ser Lys Gly Ala Asn Pro Val Glu Ile Arg Arg Gly Val
 130 135 140
 Met Leu Ala Val Asp Ala Val Ile Ala Glu Leu Lys Lys Gln Ser Lys
 145 150 155 160
 Pro Val Thr Thr Pro Glu Glu Ile Ala Gln Val Ala Thr Ile Ser Ala
 165 170 175
 Asn Gly Asp Lys Asp Ile Gly Asn Ile Ile Ser Asp Ala Met Lys Lys
 180 185 190
 Val Gly Arg Lys Gly Val Ile Thr Val Lys Asp Gly Lys Thr Leu Asn
 195 200 205
 Asp Glu Leu Glu Ile Ile Glu Gly Met Lys Phe Asp Arg Gly Tyr Ile
 210 215 220
 Ser Pro Tyr Phe Ile Asn Thr Ser Lys Gly Gln Lys Cys Glu Phe Gln
 225 230 235 240
 Asp Ala Tyr Val Leu Leu Ser Glu Lys Lys Ile Ser Ser Val Gln Ser
 245 250 255
 Ile Val Pro Ala Leu Glu Ile Ala Asn Ala His Arg Lys Pro Leu Val
 260 265 270
 Ile Ile Ala Glu Asp Val Asp Gly Glu Ala Leu Ser Thr Leu Val Leu
 275 280 285
 Asn Arg Leu Lys Val Gly Leu Gln Val Val Ala Val Lys Ala Pro Gly
 290 295 300
 Phe Gly Asp Asn Arg Lys Asn Gln Leu Lys Asp Met Ala Ile Ala Thr
 305 310 315 320
 Gly Gly Ala Val Phe Gly Glu Glu Gly Leu Asn Leu Asn Leu Glu Asp
 325 330 335
 Val Gln Ala His Asp Leu Gly Lys Val Gly Glu Val Ile Val Thr Lys
 340 345 350
 Asp Asp Ala Met Leu Leu Lys Gly Lys Gly Asp Lys Ala His Ile Glu
 355 360 365
 Lys Arg Ile Gln Glu Ile Thr Glu Gln Leu Asp Ile Thr Thr Ser Glu
 370 375 380
 Tyr Glu Lys Glu Lys Leu Asn Glu Arg Leu Ala Lys Leu Ser Asp Gly
 385 390 395 400
 Val Ala Val Leu Lys Val Gly Gly Thr Ser Asp Val Glu Val Asn Glu
 405 410 415
 Lys Lys Asp Arg Val Thr Asp Ala Leu Asn Ala Thr Arg Ala Ala Val
 420 425 430
 Glu Glu Gly Ile Val Leu Gly Gly Gly Cys Ala Leu Leu Arg Cys Ile
 435 440 445
 Pro Ala Leu Asp Ser Leu Lys Pro Ala Asn Glu Asp Gln Lys Ile Gly
 450 455 460
 Ile Glu Ile Ile Lys Arg Ala Leu Lys Ile Pro Ala Met Thr Ile Ala
 465 470 475 480
 Lys Asn Ala Gly Val Glu Gly Ser Leu Ile Val Glu Lys Ile Leu Gln
 485 490 495
 Ser Ser Ser Glu Val Gly Tyr Asp Ala Met Leu Gly Asp Phe Val Asn
 500 505 510
 Met Val Glu Lys Gly Ile Ile Asp Pro Thr Lys Val Val Arg Thr Ala
 515 520 525
 Leu Leu Asp Ala Ala Gly Val Ala Pro Leu Leu Thr Thr Ala Glu Ala
 530 535 540
 Val Val Thr Glu Ile Pro Lys Glu Glu Lys Asp Pro Gly Met Gly Ala
 545 550 555 560
 Met Gly Gly Met Gly Gly Gly Met Gly Gly Met Phe

565

570

<210> 8
 <211> 573
 <212> PRT
 <213> Homo sapiens

<400> 8

Met Leu Arg Leu Pro Thr Val Phe Arg Gln Met Arg Pro Val Ser Arg
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 Val Leu Ala Pro His Leu Thr Arg Ala Tyr Ala Lys Asp Val Lys Phe
 20 25 30
 Gly Ala Asp Ala Arg Ala Leu Met Leu Gln Gly Val Asp Leu Leu Ala
 35 40 45
 Asp Ala Val Ala Val Thr Met Gly Pro Lys Gly Arg Thr Val Ile Ile
 50 55 60
 Glu Gln Ser Trp Gly Ser Pro Lys Val Thr Lys Asp Gly Val Thr Val
 65 70 75 80
 Ala Lys Ser Ile Asp Leu Lys Asp Lys Tyr Lys Asn Ile Gly Ala Lys
 85 90 95
 Leu Val Gln Asp Val Ala Asn Asn Thr Asn Glu Glu Ala Gly Asp Gly
 100 105 110
 Thr Thr Thr Ala Thr Val Leu Ala Arg Ser Ile Ala Lys Glu Gly Phe
 115 120 125
 Glu Lys Ile Ser Lys Gly Ala Asn Pro Val Glu Ile Arg Arg Gly Val
 130 135 140
 Met Leu Ala Val Asp Ala Val Ile Ala Glu Leu Lys Lys Gln Ser Lys
 145 150 155 160
 Pro Val Thr Thr Pro Glu Glu Ile Ala Gln Val Ala Thr Ile Ser Ala
 165 170 175
 Asn Gly Asp Lys Glu Ile Gly Asn Ile Ile Ser Asp Ala Met Lys Lys
 180 185 190
 Val Gly Arg Lys Gly Val Ile Thr Val Lys Asp Gly Lys Thr Leu Asn
 195 200 205
 Asp Glu Leu Glu Ile Ile Glu Gly Met Lys Phe Asp Arg Gly Tyr Ile
 210 215 220
 Ser Pro Tyr Phe Ile Asn Thr Ser Lys Gly Gln Lys Cys Glu Phe Gln
 225 230 235 240
 Asp Ala Tyr Val Leu Leu Ser Glu Lys Lys Ile Ser Ser Ile Gln Ser
 245 250 255
 Ile Val Pro Ala Leu Glu Ile Ala Asn Ala His Arg Lys Pro Leu Val
 260 265 270
 Ile Ile Ala Glu Asp Val Asp Gly Glu Ala Leu Ser Thr Leu Val Leu
 275 280 285
 Asn Arg Leu Lys Val Gly Leu Gln Val Val Ala Val Lys Ala Pro Gly
 290 295 300
 Phe Gly Asp Asn Arg Lys Asn Gln Leu Lys Asp Met Ala Ile Ala Thr
 305 310 315 320
 Gly Gly Ala Val Phe Gly Glu Glu Gly Leu Thr Leu Asn Leu Glu Asp
 325 330 335
 Val Gln Pro His Asp Leu Gly Lys Val Gly Glu Val Ile Val Thr Lys
 340 345 350
 Asp Asp Ala Met Leu Leu Lys Gly Lys Gly Asp Lys Ala Gln Ile Glu
 355 360 365
 Lys Arg Ile Gln Glu Ile Ile Glu Gln Leu Asp Val Thr Thr Ser Glu
 370 375 380
 Tyr Glu Lys Glu Lys Leu Asn Glu Arg Leu Ala Lys Leu Ser Asp Gly

385		390		395		400									
Val	Ala	Val	Leu	Lys	Val	Gly	Gly	Thr	Ser	Asp	Val	Glu	Val	Asn	Glu
				405					410					415	
Lys	Lys	Asp	Arg	Val	Thr	Asp	Ala	Leu	Asn	Ala	Thr	Arg	Ala	Ala	Val
			420					425					430		
Glu	Glu	Gly	Ile	Val	Leu	Gly	Gly	Gly	Cys	Ala	Leu	Leu	Arg	Cys	Ile
		435					440					445			
Pro	Ala	Leu	Asp	Ser	Leu	Thr	Pro	Ala	Asn	Glu	Asp	Gln	Lys	Ile	Gly
	450					455					460				
Ile	Glu	Ile	Ile	Lys	Arg	Thr	Leu	Lys	Ile	Pro	Ala	Met	Thr	Ile	Ala
465					470					475					480
Lys	Asn	Ala	Gly	Val	Glu	Gly	Ser	Leu	Ile	Val	Glu	Lys	Ile	Met	Gln
			485						490					495	
Ser	Ser	Ser	Glu	Val	Gly	Tyr	Asp	Ala	Met	Ala	Gly	Asp	Phe	Val	Asn
			500					505					510		
Met	Val	Glu	Lys	Gly	Ile	Ile	Asp	Pro	Thr	Lys	Val	Val	Arg	Thr	Ala
	515						520					525			
Leu	Leu	Asp	Ala	Ala	Gly	Val	Ala	Ser	Leu	Leu	Thr	Thr	Ala	Glu	Ala
	530					535					540				
Val	Val	Thr	Glu	Ile	Pro	Lys	Glu	Glu	Lys	Asp	Pro	Gly	Met	Gly	Ala
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Met	Gly	Gly	Met	Gly	Gly	Gly	Met	Gly	Gly	Gly	Met	Phe			
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<210> 9

<211> 255

<212> PRT

<213> Artificial Sequence

<220>

<223> Common motif

<400> 9

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Arg	Val	Glu	Trp	Gly	Pro	Thr	Asp	Gly	Val	Ala	Lys	Ile	Leu	Asp	Tyr
		20						25					30		
Ile	Gly	Ala	Leu	Val	Val	Ala	Thr	Ala	Gly	Asp	Gly	Thr	Thr	Thr	Ala
	35						40					45			
Thr	Val	Leu	Ala	Glu	Gly	Gly	Ala	Asn	Pro	Arg	Gly	Ala	Val	Val	Leu
	50					55					60				
Lys	Lys	Val	Thr	Glu	Ile	Ala	Ala	Ile	Ser	Ala	Gly	Asp	Ile	Gly	Ile
65					70					75					80
Ala	Met	Lys	Val	Gly	Gly	Val	Ile	Thr	Val	Thr	Leu	Glu	Glu	Gly	Met
			85						90					95	
Phe	Asp	Gly	Tyr	Ile	Ser	Tyr	Phe	Gln	Asp	Tyr	Leu	Leu	Lys	Ser	Pro
		100						105					110		
Leu	Glu	Lys	Pro	Leu	Ile	Ile	Ala	Glu	Asp	Val	Gly	Glu	Ala	Leu	Ser
	115						120					125			
Thr	Leu	Val	Asn	Val	Ala	Val	Lys	Ala	Pro	Gly	Phe	Gly	Asp	Arg	Lys
	130					135					140				
Leu	Asp	Met	Ala	Ile	Thr	Gly	Gly	Val	Glu	Glu	Leu	Leu	Glu	Leu	Gly
145					150					155					160
Lys	Val	Val	Thr	Lys	Asp	Gly	Gly	Asp	Ile	Arg	Ile	Ser	Tyr	Glu	Lys
			165						170					175	
Leu	Glu	Arg	Leu	Ala	Lys	Leu	Gly	Val	Ala	Val	Lys	Gly	Val	Glu	Glu
			180					185						190	

Lys	Arg	Asp	Ala	Ala	Ala	Val	Glu	Glu	Gly	Ile	Val	Gly	Gly	Gly	Leu
		195					200					205			
Leu	Pro	Leu	Asp	Leu	Asp	Gly	Ile	Lys	Leu	Pro	Leu	Ala	Asn	Gly	Glu
	210					215					220				
Glu	Lys	Gly	Ala	Gly	Gly	Asp	Pro	Lys	Val	Arg	Ala	Leu	Ala	Ala	Ala
225					230					235					240
Leu	Thr	Glu	Val	Val	Pro	Glu	Lys	Pro	Gly	Gly	Met	Gly	Gly	Met	
				245					250					255	

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